

## **REMARKS**

This is a full and timely response to the outstanding Office Action mailed June 6, 2005. Reconsideration and allowance of the application and pending claims are respectfully requested.

### **I. Drawings Objection**

The drawings have been objected to under 37 C.F.R. 1.83(a) for not showing every feature of the invention specified in the claims. Specifically, the drawings are objected to for not showing vertical displacement means of claims 8 and 18.

In response to this objection, claims 8 and 18 have been canceled.

In view of the above-noted amendments, Applicant respectfully submits that the drawings are acceptable and respectfully requests that the objection be withdrawn.

### **II. Claim Rejections - 35 U.S.C. § 103(a)**

Claims 1-33 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Costanzo (U.S. Pat. No. 6,494,312) in view of Klint (U.S. Pat. No. 3,857,472). Applicant respectfully traverses this rejection.

As has been acknowledged by the Court of Appeals for the Federal Circuit, the U.S. Patent and Trademark Office (“USPTO”) has the burden under section 103 to establish a *prima facie* case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. *See In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The Manual of Patent Examining Procedure (MPEP) section 2143

discusses the requirements of a *prima facie* case for obviousness. That section provides as follows:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teaching. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure.

In the present case, the prior art does not teach or suggest all of the claim limitations, and there is no suggestion or motivation in the prior art to modify the references to include those limitations. Applicant discusses the Klint reference and Applicant's claims in the following.

#### **A. The Klint Disclosure**

Klint discloses a conveyor for advancing and orienting eggs. Klint, Patent Title. More specifically, Klint discloses a conveyor that includes a plurality of hourglass shaped rollers that orient the eggs when they are carried by the conveyor to a gripper unit. Klint, column 1, lines 8-15. The rollers are driven by a drive means that causes the rollers to rotate to thereby orient the eggs. Klint, column 1, lines 16-18; column 2, lines 29-32.

Turning to the detailed description of the Klint reference, the Klint conveyor includes alternate links (5, 6) that carry holders for hourglass shaped rollers (11, 13). Klint,

column 4, lines 31-35 and 57-62. The holders include forked members (8, 9) that are connected by pins (14) on which the rollers (11, 13) are mounted. Klint, column 4, lines 47-56. The rollers (11, 13) are specifically designed to support eggs. As is described by Klint, the “radius of curvature of [the rollers’] central portions may be approximately equal to the radius of curvature in an axial section through the egg, i.e. about 35-40 millimetres for hens’ eggs.” Klint, column 4, lines 65-68.

Gear wheels (12) are secured to the rollers (11, 13) to enable driving of the rollers. Klint, column 4, lines 57-62; column 5, lines 3-25. In particular, a gear wheel (15) *engages the gear wheels* (12) of the rollers (11, 12) to rotate the rollers synchronously in opposite directions so that the eggs are oriented such that a longitudinal axis of the eggs is aligned with the direction of travel of the conveyor. Klint, column 5, lines 3-36. Significantly, the chain, gear wheel (15) does not couple to the rollers (11, 13).

## B. Applicant’s Claims

### 1. Claims 1-7, 9-10, and 27-28

Independent claim 1 provides as follows (emphasis added):

1. A conveyor comprising:  
a conveyor belt including a plurality of cavities and a plurality of diverting rollers, each diverting roller being disposed in a cavity; and  
*at least one transverse roller* having an axis that extends in a direction of travel of the conveyor belt and *that can couple to the plurality of diverting rollers to cause the diverting rollers rotate as they travel along the at least one transverse roller.*

In regard to claim 1, neither Costanzo nor Klint teach or suggest a transverse roller that can “couple to a plurality of diverting rollers to cause the diverting rollers to rotate” as they travel along the transverse roller. With specific reference to the Klint reference, Klint teaches hourglass shaped rollers that support and orient eggs, the rollers being driven by a gear wheel (15) that meshes with a gear wheels (12) secured to the rollers. Nowhere does Klint teach or suggest a “transverse roller” that can actually “couple to a plurality of diverting rollers” that are provided in cavities of a conveyor belt. Therefore, the proffered combination does not teach or suggest all of the limitations of claim 1.

As a further point, Applicant respectfully objects to the combination of the teachings of the Costanzo and Klint references. Although both references generally pertain to the conveyor arts, the similarities of their disclosed systems end there. Costanzo teaches a conveyor belt comprising a plurality of rollers that divert objects from the conveyor belt when the rollers rotate. Klint, on the other hand, teaches a conveyor belt that includes rollers that orient eggs so that they can be picked and broken. Given the disparate nature of the actions being performed by Costanzo’s and Klint’s respective systems (i.e., diverting versus orienting), a person having ordinary skill in the art would not think to attempt to combine the teachings of these two references.

Even if such a person would consult the teachings of both references, there is simply no suggestion provided by either reference to combine Klint’s “hourglass shaped rollers” or “gear wheel” with Costanzo’s conveyor belt, or guidance as to why or how such a modification could be made. The only suggestion of a combination of transverse rollers with diverting rollers in a conveyor belt comes from Applicant’s own disclosure. As is well established in the law, such hindsight to the Applicant’s own disclosure is *per se*

improper. *See Crown Operations International, Ltd. v. Solutia, Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002) (a determination of obviousness cannot be based on a *hindsight combination of components selectively culled from the prior art to fit the parameters of the invention*).

In view of at least the foregoing, Applicant submits that the proffered combination does not render claim 1, or claims 2-7, 9-10, and 27-28 which depend from claim 1, obvious.

## **2. Claims 11-17 and 29-30**

Independent claim 11 provides as follows (emphasis added):

11. A conveyor comprising:

a conveyor belt that travels in a linear motion, the conveyor belt including a plurality of cavities and a plurality of diverting rollers, each diverting roller disposed in a cavity; and

*a plurality of transverse rollers* having axes that extend along a direction of belt travel, the transverse rollers *being free to rotate and being adapted to couple to the plurality of diverting rollers, wherein such coupling causes the diverting rollers to rotate in a first direction transverse to the direction of belt travel and the transverse rollers to rotate in a second direction transverse to the direction of belt travel*, the second direction being different from the first direction.

In regard to claim 11, neither Costanzo nor Klint teach or suggest a “plurality of transverse rollers” that are “free to rotate and being adapted to couple to the plurality of diverting rollers”. With specific reference to the Klint reference, Klint does not teach any

transverse rollers that are “free to rotate”. To the contrary, Klint’s hourglass shaped rollers are *driven* by a gear wheel, which is driven by a drive motor. Klint, column 5, lines 3-11. In addition, Klint does not teach any transverse rollers that are adapted to actually couple to “diverting rollers” that are provided in cavities of a conveyor belt.

Furthermore, Klint does not teach that coupling between a transverse roller and a diverting roller of a conveyor belt “causes the diverting rollers to rotate in a first direction transverse to the direction of belt travel and the transverse rollers to rotate in a second direction transverse to the direction of belt travel, the second direction being different from the first direction”.

In view of at least the foregoing, Applicant submits that the proffered combination does not render claim 11, or claims 12-17 and 29-30 which depend from claim 11, obvious.

### 3. Claims 20, 23, and 25

Independent claim 20 provides as follows (emphasis added):

20. A method for conveying objects, the method comprising:  
driving a conveyor belt in a first direction;  
*coupling diverting rollers disposed in the conveyor belt with a transverse roller that is free to rotate in a direction that is transverse to the first direction, wherein the driving of the modular conveyor belt produces rotary motion in both the diverting rollers and the transverse roller as a result of their coupling;* and  
diverting objects from the conveyor belt using the diverting rollers.

In regard to claim 20, neither Costanzo nor Klint teach or suggest a method comprising “coupling diverting rollers disposed in the conveyor belt with a transverse roller that is free to rotate in a direction that is transverse to the first direction, wherein the driving of the modular conveyor belt produces rotary motion in both the diverting rollers and the transverse roller as a result of their operative coupling” for reasons described above.

In view of at least the foregoing, Applicant submits that the proffered combination does not render claim 20, or claims 23 and 25 which depend from claim 20, obvious.

#### 4. Claims 31-33

Independent claim 31 provides as follows (emphasis added):

31. A conveyor comprising:

a conveyor belt that travels in a linear motion including a plurality of cavities and a plurality of diverting rollers, each diverting roller disposed in a cavity, the cavities and diverting rollers being laterally spaced across a width of the conveyor belt such that a plurality of rows of diverting rollers are provided parallel to the linear motion; and

*a transverse roller* that extends in the direction of the linear motion and *that is located under one of the plurality of rows to couple to a row of diverting rollers;*

*wherein the diverting rollers rotate in a direction transverse to the linear motion as the conveyor belt travels when the diverting rollers are coupled to the transverse roller.*

In regard to claim 31, neither Costanzo nor Klint teach or suggest a transverse roller that is “located under one of the plurality of rows [of diverting rollers disposed in cavities of the conveyor belt] to couple to a row of diverting rollers”.

Costanzo and Klint further do not teach or suggest a system in which diverting rollers “rotate in a direction transverse to the linear motion as the conveyor belt travels when the diverting rollers are *coupled to the transverse roller*” for reasons discussed above.

In view of at least the foregoing, Applicant submits that the proffered combination does not render claim 31, or claims 32 and 33 which depend from claim 31, obvious.

### **C. Summary**

In summary, it is Applicant’s position that Applicant’s claims clearly are allowable over Costanzo/Klint. Applicant therefore respectfully requests that the rejection of these claims be withdrawn.

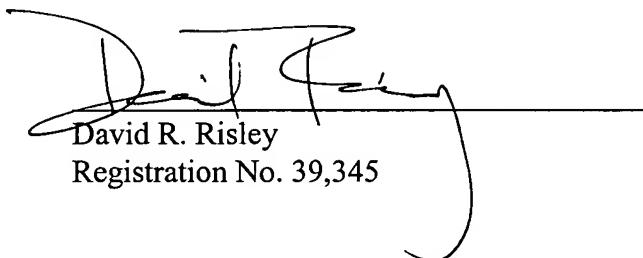
### **III. Canceled Claims**

Claims 8, 18-19, 21-22, 24, and 26 have been canceled from the application without prejudice, waiver, or disclaimer. Applicant reserves the right to present these canceled claims, or variants thereof, in continuing applications to be filed subsequently.

## CONCLUSION

Applicant respectfully submits that Applicant's pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



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